in the axial direction in such a way that the piston **21** executes one complete intake motion. The work chamber **22** becomes larger, and lubricant, such as oil, flows into the work chamber **22** via the inlet valve **12**.

The locking wheel **46** is held in a manner fixed against relative rotation. At the latest when the transverse pin **42** runs up against the ribs **35, 36**, the stepping motor **55** stops. The pull magnet **51** is now deexcited, and as a result the locking wheel **46** is released. The stepping motor **55**, which until now has served to impart a reciprocating motion to the piston **21**, now positions the now freely rotatable locking wheel **46** onward by one tooth. In the process, the transverse pin **42** carries the ribs **35, 36** and thus the coupling half **34** along with it. The control groove **25** is thereby moved into coincidence with the radial bore **17***a* . Once this position is reached, the pull magnet **51** is triggered again and as a result presses the locking bar **48** into the corresponding interstice between teeth of the locking wheel **46**. As a result, this locking wheel is once again retained in a manner fixed against relative rotation.

For dispensing a desired portion of lubricant to the lubricant line **5***a*, the stepping motor **55** is now triggered counter clockwise. Because of the size of the windows **37, 38**, the rotary motion is limited here to a one-quarter rotation. If the stepping motor **55** traverses this course, this rotary motion is converted, by interaction of the threaded element **44** with the female thread **45**, into an axial motion of the coupling half **34** that is oriented downward, in terms of FIG. **2**. Via the actuating rod **32**, the piston **21** is moved, without rotating, downward in the direction of its top dead center **27**. The positively displaced oil is correspondingly dispensed at the lubricant line **5***a*. There is no need for the entire course available to be traversed. The stepping motor **55** can also be stopped before it has executed a one-quarter rotation. A lesser quantity of oil is then correspondingly dispensed. As a result, fine metering of the oil portions to be dispensed is attainable.

Once the downward motion of the piston **21** has ended, the stepping motor **55** is actuated clockwise again, until the transverse pin **42** again meets the ribs **35, 36**. The pull magnet **51** is now released, and as a result the compression spring **49** moves the locking bar **48** radially outward and releases the locking wheel **46**. The stepping motor can now rotate onward by one tooth (or as needed a plurality of teeth), carrying the coupling half **34** and thus the piston **21** by rotation along with it, in order to approach the next lubricating position. For instance, the control groove **25** is now made to coincide with the radial bore **17***b*. The process described in conjunction with the radial bore **17***a* now begins over again. As described, all the radial bores **17** can thus be approached in succession, and thus all the lubricant lines **5** can be supplied separately with suitable portions of oil.

The dispensing of an oil portion can be done in pulsed fashion, as illustrated by FIG. **8**; the injection pressure p built up by the pump device **7***a* is modulated within a lubricating interval t_1 t_2. To that end, the stepping motor **55** is triggered and moved incrementally, so that the piston **21** is likewise moved incrementally. In each of the brief resting periods, the pressure p can drop somewhat below a pressure limit value p_1. The connected nozzles begin to inject at the pressure limit value p_1. If the pressure meanwhile drops below this value, for instance to a somewhat lesser value p_0, then the nozzles inject intermittently. The incoming flow v_1. to the nozzles fluctuates as a result and over time, as a consequence of the elasticity of the lines. The nozzles inject the oil stream V_2* droplet by droplet in the form of micropulses, so that the oil stream between individual droplets, because of the brief pressure drops, is zero. In this way, even small oil quantities can be dispensed over a prolonged time in the injection stream, using relatively large nozzles that are not likely to become stopped up.

When the lubricating device **1** is put into operation, venting of the pump device **7***a* may initially be needed. To that end, the piston **21** is rotated into a venting position, in which its control groove **25** coincides with a radial bore **17***l* that is open to the outside and in which no check valve is disposed. One or more complete piston strokes now cause the expulsion of air and the filling of the pump volume with oil. Proper operation can then be begun.

A modified embodiment of the locking mechanism is shown in FIG. **9**. Here the locking wheel **46** is embodied as a ratchet wheel. The locking bar **48** is embodied as a pawl. This makes it unnecessary to trigger the pull magnet each time the locking wheel **46** is to be indexed onward. The locking bar **48** is spring-loaded toward the locking wheel **46**. It enables a rotation of the ratchet wheel **46** in the clockwise direction (arrow **70**) for rotating the piston **21** and thus actuating the distributor. In the opposite direction (arrow **71**), however, any rotation is blocked, so that the pumping operation can be performed. It is now necessary to actuate the lifting magnet **51** only in a very few exceptional cases.

A further modified embodiment is shown in FIG. **10**. The toothing of the locking wheel **46** has teeth **47** with a relatively slight flank pitch. The locking bar **48** is embodied as a radially resilient pawl. The control of the rotary motion of the piston **21** in this embodiment is effected in that the stepping motor **55**, once the play of the coupling device **39** has been traversed, overcomes the detent moment of the locking bar by rotating clockwise or counterclockwise.

In a lubricating device for a plurality of lubricating stations, especially for supplying lubricant to knitting machines, a pump device **7***a* is provided that acts at the same time as distributor device **7***b*. To that end, the pump and distributor unit **7** has a piston **25**, which is provided with a control groove **25**. The corresponding pump cylinder has one inlet and a plurality of outlets that are distributed over the cylinder wall. Depending on which of the outlets the control groove **25** of the piston **21** is made to coincide with, a corresponding lubricating station is selected. The pump device **7** is thus at the same time a distributor device.

What is claimed is:

1. A lubricating device for a plurality of lubricating stations, in particular for supplying lubricant to a plurality of lubricating stations in a knitting machine,

having a pump device (**7***a*) for pumping lubricant, the pump device having a piston (**21**) supported axially displaceably in a cylinder (**8**), and

having a distributor device (**7***b*), by which the lubricant pumped by the piston (**21**) is to be distributed to one or more lines (**5**) of a group (**4**) of lines (**5**) leading away from the distributor device (**7***b*), characterized in that the distributor device (**7***b*) is part of the pump device (**7***a*), and

the piston (**21**) is connected to a locking device (**46, 48**), which serves to arrest the piston (**21**) in a manner fixed against relative rotation in selected rotary positions, while allowing an axial motion.

2. The lubricating device of claim **1**, characterized in that the cylinder (**8**) has a plurality of outlet conduits (**17**), which are controllable by the piston (**21**).

3. The lubricating device of claim **1**, characterized in that the cylinder (**8**) has a cylindrical cylinder wall, and that the outlet conduits (**17**) are disposed penetrating the cylinder wall.

4. The lubricating device of claim 3, characterized in that the control conduit (25), for forming the distributor device (7b), can be brought into coincidence with at least one of the outlet conduits by rotation of the piston (21).

5. The lubricating device of claim 1, characterized in that the piston (21) is provided with at least one control conduit on its jacket face (23).

6. The lubricating device of claim 5, characterized in that the control circuit (25), for forming the distributor device (7b), can be brought into coincidence with at least one of the outlet conduits by rotation of the piston (21).

7. The lubricating device of claim 1, characterized in that the piston (21) is rotatably supported in the cylinder (8).

8. The lubricating device of claim 1, characterized in that the pump device (7a) and the distributor device (7b) are connected to a drive device (33), and the drive device (33) includes a rotator device (55) and a displacement device (44), with the piston (21) connected to both the displacement device (44) and the rotator device (55).

9. The lubricating device of claim 8, characterized in that the rotator device (55) has a control motor which generates a desired rotary positioning motion.

10. The lubricating device of claim 9, characterized in that the stepping motor can be connected to the piston (21) in a manner fixed against relative rotation by means of a coupling device (39).

11. The lubricating device of claim 10, characterized in that the coupling device (39) has a defined rotary play.

12. The lubricating device of claim 8, wherein the control motor is a stepping motor.

13. The lubricating device of claim 1, characterized in that the locking device (46, 48) has a locking member (48), which can be brought into and out of engagement with a locking wheel (46) that is connected to the piston (21) in a manner fixed against relative rotation.

14. The lubricating device of claim 13, characterized in that the locking member (48) can be switched into and out of engagement with the locking wheel (46) by means of a positioning drive (51).

15. The lubricating device of claim 14, characterized in that the locking wheel (46) is embodied as a ratchet wheel, and the locking member (48) is embodied as a pawl.

16. The lubricating device of claim 1, characterized in that a control device is provided, with which the stroke of the piston (21) can be defined.

17. The lubricating device of claim 1, characterized in that an inlet conduit (12) leading into the cylinder (8) and outlet conduits (17) communicating with the lines (5) are each provided with one check valve.

18. The lubricating device of claim 1, characterized in that a sensor device (66) is provided for monitoring the motion of the piston (21).

19. lubricating device for a plurality of lubricating stations, in particular for supplying lubricant to a plurality of lubricating stations in a knitting machine,

having a pump device (7a) for pumping lubricant, the pump device having a piston (21) supported axially displaceably in a cylinder (8), and

having a distributor device (7b), by which the lubricant pumped by the piston (21) is to be distributed to one or more lines (5) of a group (4) of lines (5) leading away from the distributor device (7b), characterized in that the distributor device (7b) is part of the pump device (7a),

the pump device (7a) and the distributor device (7b) are connected to a drive device (33), and the drive device (33) includes a rotator device (55) and a displacement device (44), with the piston (21) connected to both the displacement device (44) and the rotator device (55),

the displacement device (44) is actuated by the rotator device (55), and

the displacement device (44) is formed by a gear, which converts a relative rotation between the piston (21) and the rotator device (55) into a linear motion of the piston (21).

20. The lubricating device of claim 19, characterized in that the gear includes two threaded elements (44, 45), one of which is connected to the piston (21) in a manner fixed against relative rotation, and another of which is connected to the rotator device (55) in a manner fixed against relative rotation.

21. The lubricating device of claim 20, characterized in that at least one of the threaded elements (44) is connected to a magnet (62), in order to prestress the threaded elements (44) against one another.

22. A lubricating device for a plurality of lubricating stations in a machine, comprising:

a combined pump and distributor unit including a piston supported to be axially displaceable and rotatable in a cylinder, said piston having a control groove adapted to eject the lubricant therethrough toward the lubricating stations due to axial displacement of the piston within the cylinder, a wall of said cylinder having a plurality of radial openings with which said control groove is sequentially alignable as said piston is rotated within the cylinder;

pump drive means for axially displacing said piston within said cylinder to eject lubricant through said control groove; and

distributor drive means for rotating said piston within said cylinder into sequential alignment with said openings in the cylinder wall;

wherein said pump drive means and said distributor drive means are operable independently of each other to controllably produce axial displacement of said piston without rotation thereof, or rotation of the piston without axial displacement thereof, or both axial displacement and rotation of said piston with respect to one of said openings with which said control groove is brought into alignment.

23. The lubricating device of claim 22, wherein said pump drive means and said distributor drive means are components of one drive device.

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